



US007108744B2

(12) **United States Patent**
Podlas

(10) **Patent No.:** **US 7,108,744 B2**
(45) **Date of Patent:** **Sep. 19, 2006**

(54) **TAPE JOINT COMPOUNDS WITH CMC THICKENER SYSTEM**

(75) Inventor: **Thomas J. Podlas**, Hockessin, DE (US)

(73) Assignee: **Hercules Incorporated**, Wilmington, DE (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/939,815**

(22) Filed: **Sep. 13, 2004**

(65) **Prior Publication Data**

US 2005/0056187 A1 Mar. 17, 2005

Related U.S. Application Data

(60) Provisional application No. 60/503,268, filed on Sep. 15, 2003.

(51) **Int. Cl.**

C09K 3/10 (2006.01)

C09K 101/28 (2006.01)

C08L 1/28 (2006.01)

(52) **U.S. Cl.** **106/172.1**; 106/780; 106/801; 106/805; 106/140.1; 106/162.81; 106/162.82; 106/173.01; 106/190.1; 524/45

(58) **Field of Classification Search** 106/780, 106/801, 805, 140.1, 162.81, 162.82, 172.1, 106/173.01, 190.1; 524/45

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,891,582 A	6/1975	Desmarais	.....	260/17 R
RE29,753 E *	9/1978	Williams	.....	106/85
5,336,318 A	8/1994	Attard et al.	.....	106/780
5,382,287 A	1/1995	Podlas	.....	106/197.2
5,512,616 A	4/1996	Podlas	.....	524/18
6,712,897 B1 *	3/2004	Ayambem et al.	.....	106/189.1
2004/0158058 A1 *	8/2004	Cash et al.	.....	536/98

* cited by examiner

Primary Examiner—David Brunsman

(74) *Attorney, Agent, or Firm*—David Edwards

(57) **ABSTRACT**

CMC with CMDS greater than or equal to 0.76, optionally with a non-ionic co-thickener or a CMC with CMDS less than 0.75 is used as both the rheology modifier and partial clay substitute in tape joint compounds. This significant reduction of clay level is sufficient to eliminate most of the negative characteristics of clay in joint compound.

38 Claims, No Drawings